

R marks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Drawings

The drawings were objected to because Figure 1 did not include a "Prior Art" legend. In amended Figure 1, a "Prior Art" legend has been added. Therefore, the objection should be withdrawn.

Specification

The abstract was objected to for including two separate paragraphs. A substitute abstract has been provided. Therefore, the objection should be withdrawn.

Claim Rejections - 35 USC § 112

Claims 7 and 13 were rejected under 35 USC § 112, 2nd ¶ as being indefinite. In particular, the Examiner asserts that it is not clear how the components in each claim are connected, i.e., "how do they connect together in order to synchronize measurements with the sweeping of the wavelength of the electromagnetic energy."

Claim 7 has been amended to correct a typographical error and for clarity. Therefore, the rejection of claim 7 should be withdrawn.

Claim 13 recites a system for measuring electromagnetic energy from a device under test. The system includes a measuring system for measuring electromagnetic energy from the device under test. The system includes a periodic wavelength reference, which has a detectable response to a distinct wavelength of the electromagnetic energy to indicate to the measuring system occurrence of such a distinct wavelength as a reference point. **By indicating to the measuring system the occurrence of such a distinct wavelength as a reference point, the periodic wavelength reference synchronizes measurements with the sweeping of the wavelength of the electromagnetic energy.** In light of the foregoing, it is submitted that the rejection of claim 13 should be withdrawn.

Claim Rejections - 35 USC § 103

Claim 7, as amended, recites an optical testing instrument, which includes, *inter alia*, a tunable illumination source for illuminating a device under test using electromagnetic energy having a wavelength that is swept over a wavelength band and a wavelength dependent transmission responsive device to determine one or more distinct wavelength points in the sweep of the illumination source. A measuring circuit is synchronized to the wavelength dependent transmission responsive device to measure illumination from the device under test over at least a range of the wavelength band.

Colbourne et al. fails to disclose or fairly suggest a wavelength dependent transmission responsive device. The Office Action points to column 1, lines 48-54 of Colbourne et al. for such a teaching. It is respectfully submitted that this portion of Colbourne et al. fails to disclose or fairly suggest a wavelength dependent transmission responsive device. Column 1, lines 48-54 of Colbourne et al. include the following.

It is an object of this invention to provide an apparatus for determining the wavelength of a tunable laser signal while it is tuning, so that the tuning mechanism does not have to stop at each wavelength, thus speeding up the measurement. The wavelength accuracy is not affected by the mechanical tolerances of the tuning mechanism.

Nowhere in this passage is a wavelength dependent transmission responsive device disclosed or fairly suggested. For at least this reason, the rejection should be withdrawn.

In addition, as pointed out by the Examiner, Colbourne et al. fails to disclose a measuring circuit synchronized to a wavelength dependent transmission responsive device. The Examiner asserts that it would have been obvious to modify Colbourne's system to synchronize a measuring circuit to a "wavelength dependent" to make the system more efficient. The assertion is challenged in light of the fact that Colbourne fails to disclose a wavelength dependent transmission responsive device.

For at least these reasons, it is respectfully submitted that a *prima facie* case of obviousness has not been established and claim 7 and claims 8 and 9 dependent therefrom distinguish patentably over Colbourne et al. Therefore, the rejection should be withdrawn.

Claim 10, which has been amended for clarity, recites a method of testing an object using electromagnetic energy, which includes, *inter alia*, determining one or more distinct wavelength points using a wavelength dependent transmission responsive device to which electromagnetic energy is directed.

As discussed above, Colbourne et al. fails to disclose or fairly suggest a wavelength dependent transmission responsive device, let alone determining one or more distinct wavelength points using a wavelength dependent transmission responsive device to which electromagnetic energy is directed and coordinating a measuring electromagnetic energy step with one or more distinct wavelength points determined using a wavelength dependent transmission responsive device.

Therefore, it is respectfully submitted that a *prima facie* case of obviousness has not been established and claim 10 and claims 11 and 12 dependent therefrom distinguish patentably over Colbourne et al. Accordingly, the rejection should be withdrawn.

Claim 13 recites a system for measuring electromagnetic energy from a device under test that is illuminated with electromagnetic energy swept over a range of wavelengths. The system includes, *inter alia*, a periodic wavelength reference. The periodic wavelength reference has a detectable distinct response to a distinct wavelength of such electromagnetic energy to indicate to a measuring system the occurrence of such distinct wavelength as a reference point to synchronize measurements with the sweeping of the wavelength of the electromagnetic energy.

The Office Action recognizes that Colbourne et al. fails to disclose a periodic wavelength reference. While the Office Action points to column 1, lines 47-55 (quoted above) for the teaching of an apparatus for determining the wavelength of a tunable laser signal, it is respectfully submitted that this is not suggestive of a periodic wavelength reference.

In this rejection, it appears as though the Office Action is ignoring a structural element of claim 13. As such, it is respectfully submitted that the Office Action has failed to establish a *prima facie* case of obviousness (in accordance with the requirements of MPEP 2143), because Colbourne et al. does not teach or suggest all of the claimed elements. Therefore, it is submitted that claim 13 and claims 14-16 dependent therefrom distinguish patentably over Colbourne et al. Accordingly, the rejection should be withdrawn.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By Jason A. Worgull
Jason A. Worgull Reg. No. 48,044

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
PH: (216) 621-1113
FAX: (216)621-6165
Enclosures

CERTIFICATE OF TRANSMISSION under 37 CFR 1.8

I hereby certify that this correspondence (along with any paper referenced as being attached or enclosed) is being facsimile transmitted to 703/872-9306 at the U.S. Patent and Trademark Office on the date below.

Date: June 16, 2004

Jason A. Worgull
Jason A. Worgull

Z:\SEC113\WAS\DBMQ\P103USA\Reply_2a.wpd